

DATE:

lec 4

SUBJECT:

$$A = A^{-1} = \frac{\text{adj}}{|A|} = \frac{C^T}{|A|}$$

$$A = \begin{bmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{bmatrix}$$

$$|A| = \cos^2 \theta + \sin^2 \theta = 1$$

$$C_{11} = (-1)^{1+1} \cos \theta$$

$$C_{12} = (-1)^{1+2} = -\sin \theta$$

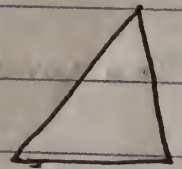
$$C_{21} = (-1)^{2+1} (-\sin \theta) = \sin \theta$$

$$C_{22} = (-1)^{2+2} \cos \theta$$

$$C_{ij} = \begin{bmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{bmatrix}$$

$$\text{adj} = C^T = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$$

$$r_1 r_2^T = \begin{bmatrix} \cos \theta & -\sin \theta \end{bmatrix} \begin{bmatrix} \sin \theta \\ \cos \theta \end{bmatrix}$$



$$= \cos \theta \sin \theta - \sin \theta \cos \theta = 0$$

$$|A| = 1$$

هذه تقدر، نقول ان  $(r_1, r_2)$  وديك  $r_2$